

CORRESPONDENCE

Dear Sir:

The August 1951 issue of *Tellus* contains a very interesting article by Dr. F. A. Berson (1951) on some aspects of vortex motion on the earth. In the course of presenting a review of several existing theories on this general subject Dr. Berson refers to a result obtained by Rossby for the force acting on a solitary vortex in a resting environment (barotropic and non-divergent) on the earth. In particular, equation (1) of Dr. Berson's paper gives the value $\frac{1}{4} R^2 \omega \beta$ as the force per unit mass acting on a simple vortex. This value is obviously obtained from Rossby's equation

$$F = \beta p \pi \int_c^R r^3 \omega dr,$$

which occurs as equation (3) in Rossby's first paper on this subject (1948). The present writer would like to point out that this is merely the net *Coriolis* force acting on the vortex and that in the non-divergent model there will exist a net *pressure* force on the vortex *even initially* when the vortex has no translation and the environment is at rest. That this is so is indicated by Rossby's later result (1949) as well as by an analysis carried out by Long (1951). (Both of the latter indicate that the initial total force on the vortex is approximately one-half that given by Rossby's first result.)

Dr. Berson does not apply this formula in his paper, but it may be well to point out this distinction at this time.

REFERENCES

- BERSON, F. A., 1951: A synoptic-aerological study of interaction between vortices. *Tellus*, **3** 172—190.
LONG, R. R., 1951: A theoretical and experimental study of the motion and stability of certain atmospheric vortices. *J. Meteor.*, **8**, 207—221 (see pp. 213—215).
ROSSBY, C. G., 1948: On displacements and intensity changes of atmospheric vortices. *J. Mar. Res.*, **7**, 175—187.
ROSSBY, C. G., 1949: On a mechanism for the release of potential energy in the atmosphere. *J. Meteor.*, **6**, 163—180 (see pp. 178—197).

Sincerely,

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CORRIGENDUM

August issue of *Tellus* 1951,

F. A. Berson on vortex interaction.

Due to regrettable mistake a wrong drawing has been substituted in Fig. 1. The downwards pointing arrow should point upward and to its right the minus sign be replaced by a plus sign. — In the text to Fig. 8a, p. 187, second line from the bottom read »corresponding broken symbols» instead of »primed numbers».